Behavioral/Health Interventions In Aviation

MAJ Stephen V. Bowles

Aeromedical Psychology Training Course

Fort Rucker, AL

15 OCT 1999

Duties and Functions: Behavioral Health

Provide consultation to flight surgeons and unit commanders regarding the assessment, treatment, and aeromedical disposition of aircrew with Behavioral Medicine conditions.

Duties and Functions: Behavioral Health

- Assessment
  - Behavioral factors impact affecting physical condition and flying safety
  - therapeutic response and outcome
  - suitability and motivation to fly

What do you think will happen if you continue to fly with this problem?

- - My symptoms will make my flying dangerous or “it is to dangerous, it may kill me”.
- + minimize the problem and want to avoid grounding

Will you fly when we fix you up?

- - Hesitation in response, “no”, showing no signs of anxiety.
- + Am I grounded? That’s a dumb question.

What do you think about these symptoms?

- -Indifferent, worried,
- + raises some legitimate concerns

Duties and Functions: Behavioral Health

- Intervention
  - provide effective and timely psychotherapeutic interventions for aircrew
    - borderline HTN
    - insomnia
    - weight management
    - airsickness

Interventions on Pilots with Hypertention

- Hypertention is a major risk factor for the development of cardiovascular disease.

- Defined as systolic greater than 140 and/or average diastolic greater than 90 is disqualifying and waiver needed.

Interventions on Pilots with Hypertension

- Aviation Psychologist provides Non-pharmacologist intervention, with weight loss, encourage aerobic exercise, encourage alcohol abstinence, smoking cessation (provide same intervention for cardiovascular disease).
- If Non-pharmacological TX fails, pharmacological TX will be initiated.

Interventions on Pilots with Cardiovascular Disease (CD)

- CD is the leading cause of permanent suspension from FD and non-accidental premature death in aircrew members worldwide.
- Educate that age and family history increase the risk of CD.
- If BP or Cholesterol is abnormal pilot must undergo cardiovascular screen. If there is evidence of significant CD they will be

Interventions on Pilots who are overweight

Army

- Body fat standards
- Age: 17-20; M 20%, F 30%
- Age: 21-27; M 22%, F 32%
- Age: 28-39; M 24%, F 34%
- Age: 40 + ; M 26%, F 36%

Air Force

- Age: 17-29; M 20%, F 28%
- Age: 30+ ; M 24%, F 32%

Interventions on Pilots who are Overweight

- Intervention when pilot exceeds body fat standards Dietary HX, Psychological HX, previous weight records, review lab tests (TSH, cholesterol)
- Over 270 cholesterol need a waiver,
- Over 250 lbs is disqualifying
- Provide behavioral TX working in conjunction with Nutrition Care and master fitness trainer
- Weight loss goal 3-8 lbs a month

LIFE Program Philosophy Behavioral Medicine Technology in Eating

Consistent Eating

- Pre-plan for potential problems/stresses early and use the problem solving process.
- When lapses occur, begin self-monitoring.
- Identify times when you are vulnerable to overeating and beware of internal/external stimuli.
- Set down your utensils when eating.
- Leave some food on your plate.

Interventions on Pilots who are overweight

- Avoid “fad diets”, fasting, hypnosis, OTC weight loss drugs, protein-sparing diets, pharmacological therapies, running in sweat suits, sauna baths, and surgical interventions, or any other method that can present a health hazard to aircrew members.

- Administratively suspend from FD on medication or surgery (stomach reduction, liposuction).

Duties and Functions: Health Promotion

- Implement programs to promote wellness and enhance aviation safety and individual readiness
  - stress management
  - pain management
  - smoking cessation

Leadership Style

- Right Stuff- Active, Self confident, Interpersonally skilled, seeks out challenging tasks, “strive for excellence”, report less stress.
- Some Stuff-Arrogant, Limited interpersonal Impatient, Irritable, “strive for excellence”
- No Stuff- Average interpersonal, low desire for challenging tasks/excellence, low self-confidence.

Interventions on Pilots for Smoking Cessation

- The objective of TX is total cessation of smoking with minimal disruption of flying. No nicotine gum chewed during flying.
- Initially PT is medically restricted from flying for 72 hours while on gum or the patch. After initial flying aviator may chew gum before and after flying or may fly with patch.
- Single episode of smoking voids FFD until cleared by flight surgeon.

Interventions on Pilots experiencing pain

- A history of episodes of chronic severe disabling back pain (especially with objective findings) are cause for medical unfitness for flying. Aspirin can be used with a waiver.

- History of migraine headaches are DQ for initial applicant. Waivers for headaches only if not severe and amenable to mild analgesic (aspirin).

Duties and Functions: Health Promotion

- Educate pilots at safety meetings about the psychological factors that influence health and performance
  - stress and fatigue
  - substance abuse
  - nutrition and fitness
  - marital communication/parenting

Duties and Functions: Organizational Health Promotion

- Serve as a consultant to the commander on factors influencing unit effectiveness, readiness, and aviation safety
  - morale, leadership
  - organizational stressors (e.g.., ops tempo)
  - identification of at risk individuals
  - selection and training of effective work teams

Behavioral Interventions on Pilots

- Actively participate in managing health.
- Utilize books/tapes
- Practice cog-b techniques

Relaxation Therapy

- Imagery
- Hypnotherapy

Autogenic Feedback Training (AFT)

- Pilots provided with twelve 45 minute training sessions of AFT (emg and thermister).
- Treatment has shown improvement in performance.
- Treatment has also been successfully used to treat airsickness for military pilots

- f

Aviation LIFE Health/Wellness

- Eating
- Exercise
- Cognition
- Life Extender for Pilots

Questions